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Notification of Reason(s) for Refusal

Patent Application No.	Patent Application No. 323145 Heisei 10 Nen (1998)
Drafting Date	March 8, 2001
Examiner of JPO	SEKI MIHOGI 9045 4G00
Representative/Applicant	Sakuta Yasuo (and another one)
Applied Provision	Patent Law Section 17-2(3), 29(2) 29-2, 36

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The application should be refused for the reason mentioned below. If the applicant has any argument against the reason, such argument should be submitted within 60 days from the date on which this notification was dispatched.

Reason

1. The amendment filed on January 9, 2001 (Heisei 13 Nen), does not comply with the requirements under Patent Law Section 17-2(3), since the amendment is outside of the matters described in the specification or drawings as filed in the point of view mentioned below.
2. The invention in the claim(s) listed below of the subject application should not be granted a patent under the provision of Patent Law Section 29(2) since it could have easily been made by persons who have common knowledge in the technical field to which the invention pertains, on the basis of the invention described in the publication listed below which was distributed in Japan or foreign countries prior to the filing of the subject application.
3. The invention in the claim(s) listed below of the subject application should not be granted a patent under the provision of Patent Law Section 29-2 since the subject invention is identical with the invention described in the specification or drawings as

filed as the following Patent application, which was filed prior to the filing of the subject application and laid open after the filing of the subject application; the inventor(s) of the subject application is not the same as the inventor(s) of the invention relating to the patent application filed prior to the filing of the subject application; and the applicant of the subject application is not the same as the applicant of the above application at the time of filing the subject application.

4. The description of claim(s) of the subject application does not comply with the requirements under Patent Law Section 36(6)-2 in the points mentioned below.

5. The description of detailed explanation of the invention of the subject application does not comply with the requirements under Patent Law Section 36(4) in the points mentioned below.

Note(The list of cited documents etc. is shown below.)

#### Reason 1

##### • Remarks

In claims 1 and 11 after the amendment, the cooling treatment of exhaust gas after the processing is deleted. However, in consideration of the specification and drawings as filed before the amendment, it is described that the cooling treatment should be performed after the processing, and no description nor recognition relating to omitting the cooling treatment after the processing can be found. Therefore, the teaching after the amendment that the cooling treatment may be omitted can not be considered as a matter which can be derived directly and unambiguously from the specification and the drawings as filed, but considered as the addition of a new matter.

Claims 3, 4, 6, 9, 10, 15, and 20, which are subordinates to only claims 1 and 11, can be considered as the addition of a new matter by the same reason as above.

If the applicant wishes to asserts that the teaching is equivalently described, the described portion whereon the assertion is based should be pointed out in the argument by the applicant.

Reason 2

- Claims 1, 3, 4, 6, 9, 10, 11, 15, and 20
- Cited documents 1-3
- Remarks

In accordance with the cited document 1, a treating method of an exhausted gas containing fluorine compounds which are used as etching agents for semiconductor material, wherein the exhaust gas is contacted with an alumina group catalyst concurrently with steam at a temperature in the range of 400-800 °C in order to convert the fluorine compounds in the exhaust gas stream to HF, is disclosed.

In accordance with the cited document 2, a method for treating an exhaust gas from an etching apparatus in a semiconductor manufacturing facility, wherein  $\text{SiF}_4$  contained in the exhaust gas is separated from  $\text{CF}_4$  by a previous treatment, is disclosed.

In accordance with the cited document 3, a treatment of exhaust gas from semiconductor manufacturing facilities, wherein substances which can be hydrolyzed and will cause clogging with the treating means at the rear stages is previously treated with water, is disclosed. Therefore, with regard to the exhaust gas treating method taught by the cited document 1, it is perceived that a person skilled in the art can easily derive the treating steps; of treating the exhaust gas with catalysts after removing  $\text{SiF}_4$ , which has a high possibility to be contained in the exhaust gas, by treating the exhaust gas previously with water, and of installing an apparatus therefor; on the basis of the teaching in the cited documents 2 and 3.

With regard to the above claims, the filing date of the subject application was taken as the day on which novelty and patentability were determined, because the original application for claiming the priority did not teach any method, wherein the exhaust gas was not cooled.

Reason 3

- Claims 1, 3, 4, 6, 9, 10, 11, 15, and 20
- Cited documents 4, 5

• Remarks

The specifications and drawings of the cited documents 4 and 5 teach methods for treating exhaust gas from semiconductor manufacturing facilities, which comprise steps of removing  $\text{SiF}_4$  in the exhaust gas previously, heating the exhaust gas, and making the exhaust gas contact with catalysts, which contain aluminum, at a temperature in the range of 200-800 °C under the presence of steam for removing fluorine containing compounds in the exhaust gas; and apparatus therefor.

The day on which novelty and patentability are determined is taken as same as the above reason 2.

Reasons 4 and 5

• Remarks

Claim 5 refers to claim 3, but claim 3 (and claim 1 referred to) does not teach any "cooled exhaust gas".

Claims 18 and 19 refer to claim 11, but the description "said cooling apparatus" is inappropriate, because any "cooling apparatus" is not described in claim 11.

It is unclear what does "said first water supplying apparatus" of claim 17 mean.

Each of "Removing filter 41" in the paragraph 44 in the specification, "piping 29" (two portions) in the paragraph 45, "monitoring apparatus 42" in the paragraph 46, "the apparatus 1C", "silicon removers 2 and 72", and "undecomposed PHC" in the paragraph 59 can be deemed as an erroneous description.

No reason for refusal can be found on the invention claimed in claims other than the claims pointed out in this notification of reasons for refusal at the present. If any reason for refusal is newly found, a notification of reason for refusal will be submitted.

The list of cited documents etc.

1. JP-A-10-192653 (1998)
  2. JP-A-10-252651 (1998)
  3. U.S. Patent 5,649,985
  4. JP-A-10-172543 (1998) (JP-A-11-070322 (1999))
  5. JP-A-10-046824 (1998) (JP-A-11-244656 (1999))
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Record of the result of search for prior art technical documents

· The field of search    IPC version 7    B01D    53/86  
                             Name of DB        WPI/L (QUESTEL)

                             This record of the result of search for prior art technical documents does not compose any reason for refusal.